

## CLAIMS

I claim:

- 1        1. A folding router table, comprising:
  - 2            a first leg pair;
  - 3            a second leg pair oppositely spaced from and generally
  - 4 parallel to said first leg pair, each said leg pair having a
  - 5 guide channel leg with a laterally offset brace leg attachment
  - 6 extension extending therefrom, and a brace leg pivotally
  - 7 attached to said laterally offset brace leg attachment extension
  - 8 of each said guide channel leg;
  - 9            each said guide channel leg and corresponding said
  - 10 pivotally attached brace leg defining a table top storage area
  - 11 therebetween when each said leg pair is folded with each said
  - 12 guide channel leg disposed substantially parallel to said
  - 13 corresponding pivotally attached brace leg;
  - 14            each said guide channel leg and each said brace leg further
  - 15 including a table top support end;
  - 16            each said guide channel leg further having an inboard side
  - 17 with a guide channel formed therein and extending from said
  - 18 table top support end, to and across said laterally offset brace
  - 19 leg attachment extension;

20 a fixed rail pivotally affixed to said table top support  
21 end of each said brace leg;

22 a slide rail slidably secured to each said fixed rail,  
23 each said slide rail further having a distal end slidably  
24 secured within a corresponding said guide channel of each said  
25 guide channel leg;

26 a first table top portion immovably affixed across each  
27 said fixed rail;

28 a second table top portion pivotally attached to said first  
29 table top portion and resting across each said slide rail when  
30 said distal end of each said slide rail is secured to said table  
31 top support end of a corresponding said guide channel leg in a  
32 table deployed position;

33 said first and said second table top portion each having an  
34 upper surface and a lower surface opposite said upper surface;

35 each said table top portion being stored within said table  
36 top storage area between each said guide channel leg and  
37 corresponding said pivotally attached brace leg when each said  
38 leg pair is folded, with each said table top portion folded  
39 together with said upper surface of each said table top portion  
40 in facing contact with one another;

41       a power tool positional adjustment mechanism affixed to and  
42 depending below said first table top portion, providing  
43 positional adjustment in mutually orthogonal first and second  
44 directions; and  
45       a router affixed to said positional adjustment mechanism.

1       2. The folding router table according to claim 1, wherein  
2 said second table top portion defines a guide fence when folded  
3 normal to said first table top portion.

1           3. The folding router table according to claim 1, wherein  
2 said power tool positional adjustment mechanism further  
3 comprises:

4           a pair of spaced apart, parallel fixed guides immovably  
5 affixed to and depending from said first table top portion;

6           each of said fixed guides further including a guide channel  
7 formed therein and at least a first end;

8           a moving guide track disposed in each said guide channel;

9           a moving guide bracket affixed to and extending inwardly  
10 from each said moving guide track;

11           a plurality of parallel slide pins extending from each said  
12 moving guide bracket, normal to said each said guide channel and  
13 guide track;

14           a guide block slidably disposed upon each said guide  
15 bracket, by means of said slide pins;

16           a power tool attachment fixture affixed between each said  
17 slidably disposed guide block;

18           an adjustment block affixed to said power tool attachment  
19 fixture, normal to each said slidably disposed guide block;

20           a base plate affixed to said first end of each of said  
21 fixed guides, and extending thereacross;

22 a first positional adjustment device affixed to said first  
23 base plate;

24 a lateral slide plate slidably disposed between each said  
25 channel of said fixed guides, and extending thereacross;

26 a first threaded rod extending between said first  
27 positional adjustment device and said lateral slide plate;

28 a second positional adjustment device affixed to said  
29 lateral slide plate; and

30 a second threaded rod extending between said second  
31 positional adjustment device and said adjustment block, normal  
32 to said first threaded rod; whereby

33 actuation of said first positional adjustment device  
34 rotates said first threaded rod and moves said lateral slide  
35 plate with said adjustment block and said power tool attachment  
36 fixture attached thereto parallel to said fixed guides by means  
37 of each said guide block and corresponding said moving guide  
38 bracket, and actuation of said second positional adjustment  
39 device rotates said second threaded rod and moves said  
40 adjustment block with said power tool attachment fixture  
41 attached thereto normal to said fixed guides by means of each  
42 said guide block sliding upon said pins of a corresponding said  
moving guide bracket.

1           4. The folding router table according to claim 3, wherein  
2 said power tool attachment fixture comprises a tool surrounding  
3 collar with a tangential pinch clamp and bolt.

1           5. The folding router table according to claim 3, wherein  
2 said first and said second positional adjustment device each  
3 comprise an electric motor.

1           6. The folding router table according to claim 5, further  
2 including at least a first and a second switch controlling said  
3 first and said second positional adjustment device.

1           7. A portable folding table, comprising:  
2           a table top folding support leg assembly;  
3           a table top storage area disposed within said support leg  
4 assembly when said support leg assembly is folded;  
5           a first table top portion; and  
6           a second table top portion pivotally attached to said first  
7 table top portion, said first and said second table top portion  
8 each having an upper surface and a lower surface opposite said  
9 upper surface; and  
10           wherein each said table top portion is stored within said  
11 table top storage area when said support leg assembly is folded,  
12 with each said table top portion folded together with said upper  
13 surface of each said table top portion in facing contact with  
14 one another.

1           8. The portable folding table according to claim 7,  
2 further including a power tool positional adjustment mechanism  
3 affixed to and depending below said first table top portion,  
4 providing positional adjustment in mutually orthogonal first and  
5 second directions.

1           9.     The portable folding table according to claim 8,  
2 wherein said power tool positional adjustment mechanism  
3 comprises:

4           a pair of spaced apart, parallel fixed guides immovably  
5 affixed to and depending from said first table top portion;

6           each of said fixed guides further including a guide channel  
7 formed therein and at least a first end;

8           a moving guide track disposed in each said guide channel;

9           a moving guide bracket affixed to and extending inwardly  
10 from each said moving guide track;

11          a plurality of parallel slide pins extending from each said  
12 moving guide bracket, normal to said each said guide channel and  
13 guide track;

14          a guide block slidably disposed upon each said guide  
15 bracket, by means of said slide pins;

16          a power tool attachment fixture affixed between each said  
17 slidably disposed guide block;

18          an adjustment block affixed to said power tool attachment  
19 fixture, normal to each said slidably disposed guide block;

20          a base plate affixed to said first end of each of said  
21 fixed guides, and extending thereacross;



22 a first positional adjustment device affixed to said first  
23 base plate;

24 a lateral slide plate slidably disposed between each said  
25 channel of said fixed guides, and extending thereacross;

26 a first threaded rod extending between said first  
27 positional adjustment device and said lateral slide plate;

28 a second positional adjustment device affixed to said  
29 lateral slide plate; and

30 a second threaded rod extending between said second  
31 positional adjustment device and said adjustment block, normal  
32 to said first threaded rod; whereby

33 actuation of said first positional adjustment device  
34 rotates said first threaded rod and moves said lateral slide  
35 plate with said adjustment block and said power tool attachment  
36 fixture attached thereto parallel to said fixed guides by means  
37 of each said guide block and corresponding said moving guide  
38 bracket, and actuation of said second positional adjustment  
39 device rotates said second threaded rod and moves said  
40 adjustment block with said power tool attachment fixture  
41 attached thereto normal to said fixed guides by means of each  
42 said guide block sliding upon said pins of a corresponding said  
moving guide bracket.

1        10. The folding router table according to claim 9, wherein  
2 said power tool attachment fixture comprises a tool surrounding  
3 collar with a tangential pinch clamp and bolt.

1        11. The folding router table according to claim 9, wherein  
2 said first and said second positional adjustment device each  
3 comprise an electric motor.

1        12. The folding router table according to claim 11,  
2 further including at least a first and a second switch  
3 controlling said first and said second positional adjustment  
4 device.

1           13.    The portable folding table according to claim 7,  
2 wherein said folding support leg assembly comprises:

3           a first leg pair;

4           a second leg pair oppositely spaced from and generally  
5 parallel to said first leg pair;

6           each said leg pair comprising a guide channel leg with a  
7 laterally offset brace leg attachment extension extending  
8 therefrom, and a brace leg pivotally attached to said laterally  
9 offset brace leg attachment extension of each said guide channel  
10 leg;

11          each said guide channel leg and corresponding said  
12 pivotally attached brace leg defining said table top storage  
13 area therebetween when each said leg pair is folded with each  
14 said guide channel leg disposed substantially parallel to said  
15 corresponding pivotally attached brace leg;

16          each said guide channel leg and each said brace leg further  
17 including a table top support end;

18          each said guide channel leg further including an inboard  
19 side with a guide channel formed therein and extending from said  
20 table top support end, to and across said laterally offset brace  
21 leg attachment extension;

22       a fixed rail pivotally affixed to said table top support  
23 end of each said brace leg;  
24       a slide rail slidingly secured to each said fixed rail;  
25       each said slide rail further having a distal end slidingly  
26 secured within a corresponding said guide channel of each said  
27 guide channel leg;  
28       said first table top portion being immovably affixed across  
29 each said fixed rail; and  
30       said second table top portion being hingedly attached to  
31 said first table top portion and resting across each said slide  
32 rail when said distal end of each said slide rail is secured to  
33 said table top support end of a corresponding said guide channel  
34 leg in a table deployed position.

1        14. A folding router table, comprising:  
2        a first table top portion;  
3        a second table top portion, pivotally attached to said  
4 first table top portion, said first and said second table top  
5 portions each having an upper surface and a lower surface  
6 opposite said upper surface;  
7        a power tool positional adjustment mechanism affixed to and  
8 depending below said first table top portion, providing  
9 positional adjustment in mutually orthogonal first and second  
10 directions; and  
11        a router affixed to said positional adjustment mechanism.

1        15.     The folding router table according to claim 14,  
2 further including:

3        a first leg pair;

4        a second leg pair oppositely spaced from and generally  
5 parallel to said first leg pair;

6        each said leg pair comprising a guide channel leg with a  
7 laterally offset brace leg attachment extension extending  
8 therefrom, and a brace leg pivotally attached to said laterally  
9 offset brace leg attachment extension of each said guide channel  
10 leg;

11       each said guide channel leg and corresponding said  
12 pivotally attached brace leg defining said table top storage  
13 area therebetween when each said leg pair is folded with each  
14 said guide channel leg disposed substantially parallel to said  
15 corresponding pivotally attached brace leg;

16       each said guide channel leg and each said brace leg further  
17 including a table top support end;

18       each said guide channel leg further including an inboard  
19 side with a guide channel formed therein and extending from said  
20 table top support end, to and across said laterally offset brace  
21 leg attachment extension;

22       a fixed rail pivotally affixed to said table top support  
23 end of each said brace leg;

24       a slide rail slidingly secured to each said fixed rail;

25       each said slide rail further having a distal end slidingly  
26 secured within a corresponding said guide channel of each said  
27 guide channel leg;

28       said first table top portion being immovably affixed across  
29 each said fixed rail;

30       said second table top portion being pivotally attached to  
31 said first table top portion and resting across each said slide  
32 rail when said distal end of each said second rail is secured to  
33 said table top support end of a corresponding said guide channel  
34 leg in a table deployed position; and

35       each said table top portion being stored within said table  
36 top storage area between each said guide channel leg and  
37 corresponding said pivotally attached brace leg when each said  
38 leg pair is folded, with each said table top portion folded  
39 together with said upper surface of each said table top portion  
40 in facing contact with one another.

1        16.     The folding router table according to claim 15,  
2 wherein said second table top portion defines a guide fence when  
3 said second table top portion is folded normal to said first  
4 table top portion.



1        17.    The portable folding table according to claim 14,  
2 wherein said power tool positional adjustment mechanism  
3 comprises:

4        a pair of spaced apart, parallel fixed guides immovably  
5 affixed to and depending from said first table top portion;

6        each of said fixed guides further including a guide channel  
7 formed therein and at least a first end;

8        a moving guide track disposed in each said guide channel;

9        a moving guide bracket affixed to and extending inwardly  
10 from each said moving guide track;

11       a plurality of parallel slide pins extending from each said  
12 moving guide bracket, normal to said each said guide channel and  
13 guide track;

14       a guide block slidably disposed upon each said guide  
15 bracket, by means of said slide pins;

16       a power tool attachment fixture affixed between each said  
17 slidably disposed guide block;

18       an adjustment block affixed to said power tool attachment  
19 fixture, normal to each said slidably disposed guide block;

20       a base plate affixed to said first end of each of said  
21 fixed guides, and extending thereacross;

22 a first positional adjustment device affixed to said first  
23 base plate;

24 a lateral slide plate slidably disposed between each said  
25 channel of said fixed guides, and extending thereacross;

26 a first threaded rod extending between said first  
27 positional adjustment device and said lateral slide plate;

28 a second positional adjustment device affixed to said  
29 lateral slide plate; and

30 a second threaded rod extending between said second  
31 positional adjustment device and said adjustment block, normal  
32 to said first threaded rod; whereby

33 actuation of said first positional adjustment device  
34 rotates said first threaded rod and moves said lateral slide  
35 plate with said adjustment block and said power tool attachment  
36 fixture attached thereto parallel to said fixed guides by means  
37 of each said guide block and corresponding said moving guide  
38 bracket, and actuation of said second positional adjustment  
39 device rotates said second threaded rod and moves said  
40 adjustment block with said power tool attachment fixture  
41 attached thereto normal to said fixed guides by means of each  
42 said guide block sliding upon said pins of a corresponding said  
43 moving guide bracket.

1        18.    The folding router table according to claim 17,  
2 wherein said power tool attachment fixture comprises a tool  
3 surrounding collar with a tangential pinch clamp and bolt.

1        19.    The folding router table according to claim 17,  
2 wherein said first and said second positional adjustment device  
3 each comprise an electric motor.

1        20.    The folding router table according to claim 18,  
2 further including at least a first and a second switch  
3 controlling said first and said second positional adjustment  
4 device.